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| 10/574,900 | 02/28/2007 | Koji Koyanagi | 0425-1252PUS1 | 3404 |
| 2292 7590 03/10/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | | |
| EXAMINER | | | | |
| LI, AIQUN | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary**Application No.**

10/574,900

Applicant(s)

KOYANAGI ET AL.

Examiner

AIQUN LI

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 2/24/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-6, 8-9 and 11-17 are pending as amended on 15 January 2010, claim 7 being cancelled.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Applicant's amendments to the claims and the remarks/arguments filed 15 January 2010 have been entered and fully considered.
- 4.

Response to Amendment and Arguments

5. Applicant's amendment to claim 1 introducing the limitation of "wherein the cationic polymer (C) has a cation density of from 0.5 to 10 meq/g and a molecular weight of 1000 to 500,000", does not overcome the nonstatutory obviousness-type double patenting. Although the new limitation narrows the scope of the instant claim 1, it does not change the fact that the copending and the instant claims are both drawn to a slurry modifier composition comprising the same cationic surfactant, anionic aromatic or bromide compound and water-reducing agent.
6. Applicant's arguments with respect to US Patent 4176107 (Buckman) have been fully considered but they are not persuasive.

Applicant argues that the cationic polymer of Buckman are precipitated rather than stably dispersed in the slurry. Buckman expressly discloses that the polyelectrolyte can be suitably dispersed without precipitation (col.3, line 65-68 and col.1, line 49-52). Further, it is noted that the precipitation/dispersion features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that there is no motivation to combine the references, Buckman teaches the cationic polymers as thickeners in aqueous emulsions (col.7, line 10-15), while Yamamuro teaches compound A and compound B of the slurry rheology modifier can be used in combination with other existing thickening agents including polymer based thickening agents ([0084]). Therefore at the time the invention was made it would have been obvious for a person of ordinary skill in the art to include Buckman's cationic polymer thickening agent in the rheology modifier composition of Yamamuro since it has been held that it is *prima facie* obviousness to use a known material based on its suitability for its intended use, in the instant case, a polymeric thickening agent.

7. Applicant's arguments with respect to claims 1-9 and 11-17 in light of the amendments have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

8. Claims 1, 6, 9, 11-17 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 5, 8, 12, 15-17 and 19-22 of U.S. Patent No. 7374699 (hereinafter '699). Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both drawn to a slurry modifier composition comprising the same cationic surfactant, anionic aromatic or bromide compound and same water reducing agent. Although the specific compounds of '699 are not specifically named in the instant claims, the instant disclosure exemplifies these compounds. See *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

Claim Rejections - 35 USC § 103

9. **Claims 1-6, 8-9 and 11-17** are rejected under 35 U.S.C. 103(a) as being obvious over EP1266875 A2 (Yamamuro) in view of US Patent 4393939 (Smith).

Yamamuro teaches a slurry rheology modifier comprising compound A and a different compound B, wherein the viscosity of an aqueous solution at 20°C prepared by mixing an aqueous solution S_A (with a viscosity at 20°C of 100 mPa·s or less) of compound A with an aqueous solution S_B (with a viscosity at 20°C of 100 mPa·s or less) of compound B in the ratio of 50/50 by weight can be at least twice as high as the viscosity of either aqueous solution before mixed ([0011]), and wherein compound A is selected from cationic surfactants and compound B is selected from anionic aromatic compounds or brominated compounds ([0031]).

Yamamuro further teaches the slurry modifier is used to prepare hydraulic slurry containing water, a hydraulic powder ([0036]) such as cement ([0081]), fillers including calcium carbonate, fly ash, blast furnace slag, bentonite and clay ([0078]), and the slurry rheology modifier by adding the slurry modifier to the slurry ([0036], [0080] and [0081]), wherein adding one compound A or B then adding the other compound a or B to the slurry is preferred ([0081]), and the slurry may further comprises high-performance water reducing agents or high-performance AE water-reducing agents ([0082]).

Yamamuro further discloses the total content of compound A and B in the aqueous phase of the slurry is preferably 0.1 to 10 percent by weight, wherein the weight ratio of A to B is preferably 5/95 to 95/5 ([0076]).

Yamamuro does not explicitly disclose the cationic polymer C in the instant claim.

Smith discloses an improved aqueous cement slurry containing a cationic polymer as a clay stabilizers (col.1, line 5-15 and claim 1), wherein the cationic polymer contains a nitrogen cationic group and has a molecular weight of about 400-6,000,000, and average molecular weight between about 100,000-3000,000 (claim 1). Smith further discloses the cationic polymer is present in a concentration of between 0.4% to 1.3% by weight of the aqueous phase (Table II), and exemplifies the cationic polymer as derived from diallyldimethylammonium chloride (col.16, line 1 and claim 3), 4-(2-diethylamino)ethylstyrene (col.14, line 30), 3-methacryloxy-2-hydroxypropyltrimethylammonium chloride (col.14, line 62-63) etc.

At the time the invention was made it would have been obvious for a person of ordinary skill in the art to include Smith's cationic polymer and the amount in the rheology modifier composition of Yamamuro. The rationale to do so would have been the teachings of Smith that to do so would predictably provide an improved cementing composition and prevent clay swelling and disintegration of clay particles (Smith, col.1, line 5-20). Therefore, for claim 8, Smith's cationic polymer is present in a concentration of between 0.4% to 1.3% by weight of the aqueous phase (Table II), which is equivalent to about 4 to 1300 part per 100 part of compound A, calculated by the examiner based on Yamamuro's disclosure that the total content of compound A and B in the aqueous phase of the slurry is preferably 0.1 to 10 percent by weight, and a weight ratio of A to B of 95/5 ([0076]).

Further, since Yamamuro and Smith teaches the same polymer as claimed, the cationic density of the Yamamuro and Smith polymer would intrinsically be the same as claimed. If there is any difference between the product of Yamamuro and Smith and the product of the instant claims the difference would have been minor and obvious.

"Products of identical chemical composition can not have mutually exclusive properties."

A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See MPEP 2112.01(I) , *In re Best*, 562 F2d at 1255, 195 USPQ at 433, *Titanium Metals Corp v Banner*, 778 F2d 775, 227 USPQ 773 (Fed Cir 1985), *In re Ludtke*, 441 F2d 660, 169 USPQ 563 (CCPA 1971) and *Northam Warren Corp v D F Newfield Co*, 7 F Supp 773, 22 USPQ 313 (EDNY 1934).

Still further, specially regarding claims 14 and 17, the recitation "as a pipe jacking additive", "of pipe jacking" or "for pipe jacking method" merely recites the purpose of a process or the intended use of a structure. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Additionally, it is noted that Yamamuro expressly teach the modifier is capable of conferring properties excellent in viscosity and segregation resistance on water-powder slurry comprising powder used as a civil engineering/building material ([0001]).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AIQUN LI whose telephone number is (571)270-7736. The examiner can normally be reached on Monday -Thursday, 9:30 am - 6:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)2721398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. L./
Examiner, Art Unit 1796

/Timothy J. Kugel/
Primary Examiner, Art Unit 1796